

Remarks

In view of the fact that allowable subject matter has been indicated to be present in the case, an earnest effort has been made to bring this case to issue without delay.

1. The specification has been amended to provide a cross reference to the underlying German application.

2. The Examiner has indicated that claim 31 contains allowable subject matter. That claim has been written in independent form to include the subject matter of claims 23 and 30. Outright allowance of claim 31 is therefore in order.

3. Claims 1 to 23 have each been amended to include the subject matter of the immediately following dependent claim, namely, claims 2 and 24, each of which contain the requirement that the signal applied to each electrode be an orthogonal signal, i.e. a signal which has two components in quadrature (page 9, lines 12 to 13 as an example). The result, as the description on page 9 continues, is a sharp reduction in the time for evaluating the results and thus the possibility that a larger number of

measurements can be taken within a given time. It follows that processing is also simplified.

Of course, claims 2 and 24 have been cancelled as superfluous. The remaining claims are presented anew.

4. The original claims have been rejected under 35 USC 102 as being anticipated by Littrup et al or under 35 USC 103 as being obvious from Littrup in view of Levine et al.

The Littrup reference has a filing date of 27 February 2001 and thus is prior in time to the priority date of the present case.

Littrup has been cited as showing the launching of electrical excitation signals simultaneously into a sample from a plurality of sensing electrodes. It can also be said that the reference measures at a plurality of locations in a sample at least one parameter.

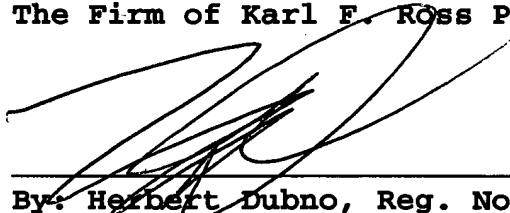
Whether the reference has the correlating step required in claim 1 or the circuitry for correlation required by claim 22 is a question that need not be answered for the purposes of evaluating whether the reference is anticipatory or not, since the reference clearly does not launch the signals as orthogonal signals into the sample.

Each orthogonal sample has, as the Examiner appears to be well aware, two components in quadrature (see page 9, lines 12, etc.) The Examiner has expended considerable effort in attempting to assert that Littrup applies orthogonal signals. He notes, for example, that Littrup provides electromagnetic signals, signals of different frequency, sinusoidal signals and signals which require sign and co-sign coefficient analysis. However, when the cited paragraph of Littrup are read, a teaching as to orthogonal signals, signals with two components in quadrature are not described, suggested or even hinted at. The reference, therefore, does not meet the requirements for orthogonal excitation signals. Littrup does provide a device for determining the complex impedance but only one current source is required at 35 and that current source does not supply, according to anything said in Littrup, orthogonal signals.

The Levine reference has been cited because of the nature of the coded digital signals in that reference. However, that reference cannot be relied upon to show orthogonal signals as the claims require and it does not contain any disclosure of them. As a consequence, even if Levine can properly be combined with Littrup, the combination would not yield the claimed invention.

The remaining references are clearly more remote. As a result, claims 1, 3 to 22, 23 to 30 and 32 to 34 ought to be considered to be allowable together with claim 31 which has already been indicated to contain allowable subject matter. An early notice to that effect is earnestly solicited.

Respectfully submitted,
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